

## FLEXIBLE BIO-PROBE ASSEMBLY

### STATEMENT OF GOVERNMENT SUPPORT

This invention was made with government support  
5 under 2R44NS33427 awarded by the SBIR. The government has  
certain rights in the invention.

### RELATED PATENT APPLICATIONS

The present application is a continuation of  
10 application 10/320,072, <sup>now U.S. Pat. No. 6,719,582,</sup> which is a continuation in part of  
application 09/653,489, filed August 31, 2000, now U. S.  
Patent 6,495,020, which is, in turn, a divisional of  
application 09/518,006, filed March 2, 2000, now U.S.  
Patent 6,368,147 issued June 25, 2002.

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### BACKGROUND OF THE INVENTION

The present invention is a method of making a  
flexible brain probe assembly.

Creating a probe that contacts the brain tissue  
20 represents a challenge to researchers. Researchers  
typically wish to measure electrical activity at specific  
sites within the brain that share a well-defined physical  
relationship to one another. Probes produced by  
photolithographic techniques, such as the probe designed  
25 by personnel at the University of Michigan that is known  
in the industry and research community as the "University  
of Michigan Probe," permit the accurate placement of  
electrode sites that are sufficiently small to permit the  
measurement of electrical activity at a specific set of  
30 predefined sites within the brain. Unfortunately, the  
desire to use photolithography has prompted the use of  
silicon as a substrate. Because this material is quite  
brittle, the use of it creates a risk of breakage inside  
the brain, endangering the subject or patient and